

Hawai'i Wildlife Fund
November 6, 2008

U.S. Environmental Protection Agency,
Ground Water Office (WTR-9)
75 Hawthorne Street
San Francisco, CA 94105
Attn: Nancy Rumrill

Dear Dr. Rumrill:

Thank you for hosting this hearing on Maui and providing us the opportunity to present testimony on the Lahaina POTW Wastewater Underground Injection Permit Application.

As the EPA knows, we have suspected that the injection wells somehow released or leached wastewater into the ground water and then into nearshore waters since the early '90's, when your office allowed Dr. Wendy Wiltse to relocate here and launch an investigation into the pernicious algae bloom. Despite the lack of definitive scientific evidence that would have assisted the EPA and the County in more stringent requirements we appreciate the EPA's application of the precautionary principle to the management of these injection wells in several ways, e.g., limiting the amount of effluent allowed into these wells, re-use of some water and reduction of nitrogen in the wastewater. But it's more than a decade later now and still more than 1 billion gal/year of reusable, nutrient-rich water is discarded in these injection wells. New research findings from the USGS, UH and DAR/DLNR/HCRI – some that have not been published yet - link wastewater from injection wells with degradation of our nearshore waters and reef decline. While we acknowledge that there are other land-based sources of pollution that impact nearshore waters, we understand that this hearing is focused on addressing whether the injection of treated wastewaters into wells in Lahaina should continue unabated.

In light of the legal, moral and ethical mandates of the Public Trust Doctrine and the Precautionary Principle, interpreted by Hawai'i's Supreme Court to be embedded in our State Constitution; the State's policies on water recycling and reuse of treated wastewaters; state and federal pollution laws; the County's own Community Plan, and the steep decline of our reefs, we must act swiftly to stop the flow of wastewater into the ocean.

We oppose an unlimited and unconditional renewal of the wastewater injection permit for this system and respectfully request that the EPA denies this permit on the current record. Instead, we ask that the EPA, Maui County and the community engage in a meaningful conversation and **plan of action** about how to best stop or phase out the wasteful practice of injection of these waters and instead re-direct treated R-1 waters for beneficial uses as is the state's policy. We urge you to consider the seriousness of this dialogue in the face of:

- **Drought:** rainfall in April-June 2008 was "31 percent below . . . average" with mandatory water restrictions by the County and an agricultural irrigation resource deficit in 2008: "90 percent below normal".

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- In August, “ongoing dry conditions led to the designation of Maui County, and the rest of the state as federal disaster areas by US Agriculture Secretary Edward Schafer”.
- Estimated Costs of New Reservoir on Maui to Deal with Drought: \$15 million.
- **Annual wild fires:** more than 10,000 acres of land burned partly from drought – nearly half of that in W. Maui.
- **Reef degradation:** significant algae overgrowth of Maui reefs is correlated with the three county wastewater injection well systems. Although the county incorporated biological nutrient removal systems that reduced nitrogen discharges by 60%, sewage wastewater continues to contribute to the harmful algal and bacteria blooms that smother our coral reefs, adversely affecting marine life.
- Coral cover loss is also correlated with county (and private) injection wells: “over 90% since 1995 [for Maalaea],” and a nearly 25% average decline in coral cover over 9 Maui reefs studied between 1994/1999-2006.
- **Stream diversion:** for drinking water and irrigation will be reduced and could be stopped. This September, the State Water Commission decreed that it will implement East Maui stream flow standards for 27 streams. This decision, which rightfully returns millions of gallons of water to the streams, could result in increased water costs for agricultural irrigation and will have ramifications for West Maui as well. Currently, large scale agricultural farms are not motivated to use wastewater for irrigation because they divert stream water and pay <\$0.15/gal for it.
- **Increased waterborne infections:** in Florida, human pathogens that serve as markers for sewage are detected in corals nearshore (human enteric bacteria and viruses) and up to 7 miles offshore (viruses). Since 1995 there has been a sharp increase of hospitalization due to staph infection. In 2007 the number of hospitalizations in Maui was 188 people per 100,000. The national average is 89 people per 100,000.
- **Harm to our economy:** estimated value of coral reefs for Hawaii’s economy = \$10 billion/year. Estimated annual cost of algal damage in Maui = more than \$20 million/year. Add the loss of habitat for marinelife, the loss of esthetic and cultural value and the loss of storm wave protection and the cost soars beyond calculation.

*This is why we call our coalition **DIRE** – Don’t **Inject**, **RE**-direct – because the situation is dire and requires a change of direction starting now.*

Maui’s water is too precious to waste. (Even the wastewater) – so are our coral reefs. If we lose them, we lose not only our livelihood, but our way of life and quality of life.

This permit must be denied based on three compelling arguments:

1. Both the County of Maui (as the public trustee of the County’s water resources) and the State of Hawai’i are mandated by the State Constitution and Supreme Court decisions to seek the best uses of all county waters including wastewaters. Because the County has not conducted the necessary exploration of possible beneficial uses for these wastewaters and has not concluded that such beneficial uses do not exist, this permit should be denied.

2. The County has failed to bear its burden of proof of entitlement to the requested permit. Under applicable federal and state court decisions, it means that with respect to all material of issues of fact, the permit applicant has the burden of persuasion. The precautionary principle applies to the County in its role as “public trustee” of all the state’s water. Therefore, the County must proactively seek the highest and best use for Maui’s waters and ensure protection of ocean waters and coral reef ecology, even in the face of considerable uncertainty. The County has failed to bear that burden of persuasion with respect to all the facts necessary for entitlement to the permit under applicable principles of law. Accordingly, the permit should be denied.

3. We offer specific information, data, and studies that together demonstrate that the permit should not be issued. Even if permit opponents have the burden of proof (which we do not), this block of information when considered together clearly is more persuasive than the information provided by the applicant to the contrary. In addition, the County may not claim that currently available information is “uncertain” or “equivocal,” for it is up to the County as “public trustee” of these waters to develop the information needed to resolve any crucial uncertainties. Accordingly, the permit application should be denied.

If EPA concludes that it cannot deny the permit application altogether, then at the very least EPA should impose the “special conditions” necessary to ensure that “best management practices” are used and “pollution prevention” goals are met and that any necessary studies are carried out. In this case, it means requiring the Lahaina POTW to employ water beneficial reuse strategies for the wastewater in preference to disposal underground that results in pollution of oceans, harm to coral reefs, adverse effects on fish, and harm to recreational uses (such as diving, snorkeling) so important to Maui’s economy. It also means phasing out the use of injection wells in a coordinated way with the implementation of water reuse alternatives.

Reusable water discarded by injection wells: county-wide over 11.5 million gallons of waste water a day is pumped into injection wells; 4.4 million gallons/day at Lahaina alone - 1.6 billion gallons/year

During this time of recurrent drought, stream flow recovery, and reef decline, we cannot afford to waste even 1 gallon of water, let alone 5 – 6 million gallons of water per day. By redirecting and re-using this wasted wastewater we can:

- help alleviate water shortages during years of recurrent drought,
- reduce the risks of fire,
- grow agriculture AND replenish and restore stream flows that have been previously diverted,
- protect our precious coral reefs and the economic benefits they bring to Maui,
- restore or create wetlands, and
- help make Maui green again.

We look forward to working together with you, the County of Maui and our communities to begin the process of finding the highest and best use of our water while maintaining the vitality of our natural environment.

Please do not hesitate to contact me at: (808)575-2046.

Sincerely,

Hannah J. Bernard

Hawai’i Wildlife Fund, Maui Reef Fund, DIRE (Attachments)

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